APBI 2007

CERDEC Overview Of Business Opportunities

Presented by
Mr. Henry Muller
Associate Technical Director,
CERDEC
31 May 2007

CERDEC Mission and Vision

Mission

To develop and integrate Command, Control, Communications, Computers, Intelligence, Surveillance, Reconnaissance (C4ISR) Technologies that enable Information Dominance and Decisive Lethality for the Networked Warfighter

Vision

To be the DoD leader in integrated C4ISR technology solutions

CERDEC Focus

- Develop And Transition C4ISR Technologies In Support Of GWOT And DoD Transformation
- Proactively Support LCMCs And Key Customers With Highly Qualified And Responsive C4ISR Engineers
- Expand System Engineering Capability (Integrated M&S, Architecture And Experimentation) To Support Current And Future Force Requirements
- Ensure Successful Strategy For Transition Of Function To APG IAW BRAC 2005 Law

CERDEC Organization

Chief Information Office/G6
Jay Kurowsky

OFFICE OF THE DIRECTOR

Technical Director – *Gary Martin (SES)*
Associate Technical Director – *Henry Muller*
Military Deputy – *COL David Moore*
Chief Scientist – *Dr. Arthur Ballato*
Associate Director – *Robert Zanzalari*

Security/G2
Beverly Gibson

HQ STAFF

Associate Director Operations
Cynthia Bulman

Associate Director Technology & Strategic Planning
Mari Kovach

DIRECTORATES

Command& Control (C2D)
Dr. Gerardo Melendez
Director

- Battle Command
- Army Power
- Battle Command Appl
- Quick Reaction & Battle Command Support

Space & Terrestrial Communications (S&TCD)
Chris Swenarton
Acting Director

- Information Assurance
- Comms Systems Integration
- Wireless Systems
- Space & SATCOM Systems
- Soldier/Sensor Comms

Night Vision & Electronic Sensors (NV&ESD)
Dr. A. Fenner Milton
Director

- Science and Technology
- Countermine
- Modeling and Simulation
- Ground Combat Systems
- Special Projects & Prototyping
- Air Systems

Intelligence & Information Warfare (I2WD)
Anthony Lisuzzo
Director

- Information/ Networks Operations
- EW Air/Ground Surv
- Fusion & Modeling
- RADAR/ Combat ID
- SIGINT/ QRC

Software Engineering (SED)
Mike Lombardi
Director

- IEW Support
- Avionics Support
- Tactical Communications
- Satellite & Management Sys
- Information Technology Engr
- Advanced Battlespace Solutions
- Fire Support

Product Realization (PRD)
Robert Golden
Director

- Manufacturing systems & production engineering
- Maintenance & reliability engineering
- Systems engineering
- Manufacturing assessments
- Supply network analysis

PdM C4ISR OTM
LTC Utroska
Mil Director

- Experimentation Design & Analysis
- System Engineering & Integration
- Resource and Facilities Management

PEO-EIS — CECOM — PEO-C3T — PEO-IEW&S — CERDEC

COMMUNICATIONS ELECTRONICS LIFECYCLE MANAGEMENT COMMAND

FY 08 DA
Technology Development Priorities

Force Protection

- Lightweight ballistic armor for Soldiers, tactical wheeled vehicles and combat vehicles
- Blast protection and mitigation for Solidiers
- Sniper defeat technologies
- Technology for mine/booby trap neutralization and defeat
- Tracking Radar for Counter-Rockets, Artillery, Mortar (C-Ram)

Force Effectiveness

- Information assurance techologies
- Technologies for scalable/tailorable battle command
- Technologies to enable networked weapon/sensor pairing
- Enhanced targeting for small arms
- Technologies to enhance Solcier and leader training and development
- Enhanced lethality (scalable effects-less-than-lethal to precision lethal)

Force Sustainment

- Fuel efficient ground vehicle demonstrator
- Rotor durability and vibration control
- High efficiency aircraft engines

Tactical Information Technologies for Assured NetOps (TITAN) ATO

- **OBJECTIVE:** To improve tactical network responsiveness, ensure trust in the network, allow information to be shared across security domains and enhance and automate tactical Battle Command applications through the development of modular tools and technologies.
- **CONTRACT TYPE:** TBD
- **ESTIMATED VALUE: Total = ~$20-30M over 4 year effort**
  - Information Assurance (IA) = ~$10-13M
  - Network Management (NM) = ~$6-10M
  - Tactical Information Dissemination & Management (ID&M) = ~$4-7M
- **KEY MILESTONES:**
  - BAA solicitation 1QFY08
  - Contract Award 2QFY08
- **TECHNICAL CONTACT:** Rosie Bauer, 732-427-3974 Rocio.Bauer@us.army.mil
- **ACQUISITION CONTACT:** Deborah Gilligan, 732-532-5454
- **SOLICITATION # OR RFQ #:** TBD, will be announced in June 07

Network Operations for Tactical Networks

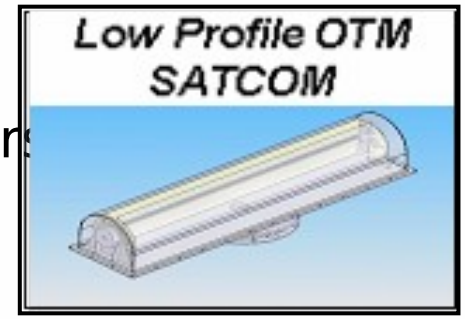
- **OBJECTIVE:** Develop a graphic user interface (GUI) to allow Network Management, Information Assurance Management, and Information Dissemination Management tools to be accessed from one tool in support of TITAN. Develop middleware to allow for interoperability between the Network Operations functions.
- **CONTRACT TYPE:** CPFF
- **ESTIMATED VALUE:** $300-600K FY08
  $700-900K FY09
- **KEY MILESTONES: Pending approval from customers**
  - Award 2QFY08
  - Initial Prototype 4QFY08
  - Beta Release 2QFY09
  - Demonstration 4QFY09
- **TECHNICAL CONTACT:** Richard Lo, 732-427-7424, richard.lo@us.army.mil
- **ACQUISITION CONTACT:** Deborah Gilligan, 732-532-5454
- **SOLICITATION # OR REQ #:** TBD

Integrated Ka/Q Band Power Amplifier Breakthrough Antenna Technologies (BAT) ATO

- **OBJECTIVE:** Develop a single-package power amplifier solution for the low-profile, multi band antenna
- **CONTRACT TYPE:** CPFF
- **ESTIMATED VALUE:** $4-6 Million over 2 years
- **KEY MILESTONES:**
  - RFI 2QFY08
  - RFP release 4QFY08
  - Contract award 2QFY09
- **TECHNICAL CONTACT:** Joseph Shields, 732-532-5887, Joseph.r.Shields@us.army.mil
- **ACQUISITION CONTACT:** Deborah Gilligan, 732-532-5454
- **SOLICITATION # OR RFQ #:** New BAA Solicitation 01 Oct 07

Low-profile, Multi-beam Antenna Breakthrough Antenna Technologies (BAT) ATO

- **OBJECTIVE:** Develop low profile multi-beam (Ka and Q band) antenna for Satellite Communications on-the-Move (SATCOM).
- **CONTRACT TYPE:** CPFF
- **ESTIMATED VALUE:** $8-10 Million over 4 years
- **KEY MILESTONES:**
  - RFI 2QFY08
  - RFP release 4QFY08
  - Contract award 2QFY09
- **TECHNICAL CONTACT:** Joseph Shields, 732-532-5887, Joseph.r.Shields@us.army.mil
- **ACQUISITION CONTACT:** Deborah Gilligan, 732-532-5454
- **SOLICITATION # OR RFQ #:** New BAA Solicitation 01 Oct 07



Mounted/Dismounted Soldier Power
(FY08 Multiple Contracts)

- **OBJECTIVE:** Improved Power and Energy sources for Soldier and Mobile Applications; Liquid-fueled fuel cells, 25-250W; Technologies / chemistries to increase power / energy densities, operational life, and energy conversion efficiency of rechargeable / primary batteries; Logistics fuel reformers; Heat-driven cooling; JP-8 fueled Stirling generators 150W – 2kW; Intelligent Power Management; Alternative Energy Conversion (solar and wind).
- **CONTRACT TYPES:** Cost-Plus and Firm-Fixed-Price
- **ESTIMATED VALUE:** $5M total
- **KEY MILESTONES:** BAAs continuously open; proposal evaluation/package prep in 1QFY08; typically award in 2QFY08
- **TECHNICAL CONTACT:** Chris Bolton 703-704-1995
- **ACQUISITION CONTACT:** Mary Paterno-Mihalko, 732-532-3992
- **SOLICITATION # OR RFQ #:** BAA W15P7T-07-R-P402 (Batteries); W909MY-05-R-0004 (Fuel cells): W909MY-05-R-0025 (Environmental Control); Hybrid Power Management/Distribution Pending

Future Efforts-Power
(FY09-11 Multiple Contracts)

- **OBJECTIVE:** Improved Power and Energy sources for Soldier and Mobile Applications; Liquid-fueled fuel cells, 1W-250W; Technologies / chemistries to increase power / energy densities, operational life, and energy conversion efficiency of rechargeable / primary batteries, including Li-CFx and Li-air; Logistics fuel reformers; Heat-driven cooling; JP-8 fueled Stirling generators 150W – 2kW; Intelligent Power Management; Alternative Energy Conversion (solar and wind).

- **CONTRACT TYPES:** Cost-Plus and Firm-Fixed-Price

- **ESTIMATED VALUE:** Approx. $7M total/year

- **KEY MILESTONES:** BAAs continuously open; proposal evaluation & package prep in 1Q of each FY; typically award in 2Q of each FY

- **TECHNICAL CONTACT:** Chris Bolton 703-704-1995

- **ACQUISITION CONTACT:** Mary Paterno-Mihalko, 732-532-3992

- **SOLICITATION # OR RFQ #:** BAA W15P7T-07-R-P402 (Batteries); W909MY-05-R-0004 (Fuel cells): W909MY-05-R-0025 (Environmental Control); Hybrid Power Management /Distribution Pending

Assured Position / Navigation

- **OBJECTIVE:**
  - Develop Micro-Electromechanical System Inertial Measurement Units (MEMS IMUs) to reduce size, weight, power, cost while improving the alignment accuracy and reliability of POS/NAV data for tactical vehicles and dismounted soldiers.
  - Develop navigation aiding techniques (Network Assisted GPS, Differential GPS servers, grid referenced RF ranging, exploitation of Signals of Opportunity and/or Human Motion Modeling) for maneuver, fire control and situation awareness.
  - Integrate navigation sensor technology developed under the Advanced POS/NAV and Tracking the Future Force (APNTFF) program and/or the Future Force Warrior (FFW) Precision Positioning System (PPS) with aiding techniques to improve the accuracy and robustness for dismounted Soldiers in GPS denied or degraded environments.
  - Demonstrate integrated system in an urban environment.
- **CONTRACT TYPE:** Cost Plus Fixed Fee
- **ESTIMATED VALUE:** $1.5M-$2M per year, FY08-FY10
- **KEY MILESTONES:**
  - **1QFY08:** BAA for 1) MEMS gyro bias improvement concept development and demonstration; 2) navigation aiding technique development for MEMS IMU position error growth mitigation
  - **1QFY09:** BAA for 1) MEMS gyro prototype development and demonstration 2) Assured Pos/Nav integration/demonstration of GPS, MEMS IMU, Barometer and inertial position error growth mitigation technology
  - **1QFY10:** BAA for MEMS IMU prototype development and demonstration
- **TECHNICAL CONTACT:** Dr. Raymond Filler, 732-427- 2467
- **ACQUISITION CONTACT:** Mr. Kenneth MacFarlane, 732-427-1493
- **SOLICITATION # OR RFO #:** W15P7T-05-R-P202

Target Location / Designation System (TLDS)

- **OBJECTIVE:** Provide the Soldier an improved man-portable, target acquisition, targeting, and laser designation system with reduced Size, Weight, and Power (SWaP). Specifically, the technical challenge is the Advance Azimuth Vertical Angle Measurement Component.

- **CONTRACT TYPE:** BAA Cost Plus Fixed Fee (No OTA)

- **ESTIMATED VALUE:** $ 5 M (Total Value of All Contracts)

- **KEY MILESTONES:** RFP Release 4thQFY08
  Contract Award 2ndQFY09

- **TECHNICAL CONTACT:** Paul Laster, 703-704-3492

- **ACQUISITION CONTACT:** TBD

- **SOLICITATION # OR RFQ #:** TBD

Sensor Technology Engineering Support for RDECOM CERDEC NVESD

- **OBJECTIVE:** Omnibus contracts to obtain support/services which will provide sensor technology engineering support including field technology assistance, test and evaluation, and engineering support and services for night vision, electronic sensors and sensor systems.

- **CONTRACT TYPE:** Small Business Set-Aside; multiple Indefinite Delivery / Indefinite Quantity type contracts under which task orders may be issued on a time and materials, firm fixed price or cost plus fixed fee basis.

- **ESTIMATED VALUE:** $495M (Total Value of All Contracts)

- **KEY MILESTONES:**

Pre-solicitation Notice	26 April 2007
RFP Release	4QFY07
Contract Award	1QFY08

- **ACQUISITION CONTACT:** Meghan Mele, 732-532-8299

- **SOLICITATION # OR RFQ #:** W15P7T-07-R-P441

Technical Engineering and Support Services (TESS)

- **OBJECTIVE:** Provide support services to the Intelligence and Information Warfare Directorate (I2WD) to include technical, engineering, program management, prototype development, fabrication and operations expertise in support of intelligence, electronic warfare and information system development in a secure environment.

- **CONTRACT TYPE:** IDIQ

- **ESTIMATED VALUE:** $900M

- **KEY MILESTONES:** Draft RFP Release July 2007

- **TECHNICAL CONTACT:** Mary Wills (732) 427-7206

- **ACQUISITION CONTACT:** Deborah Gilligan (732) 532-5454

Broad Area Announcement (BAA) Opportunities

- I2WD Support (CPFF - Through 4Q FY 09)
  - Acquisition Contact: Julianne Magee, 732-427-1499
  - Solicitation #: W15P7T-04-R-P008
- Environmental Control Technology (FFP/CPFF; $100K/$3M Through 4QFY07)
  - Technical Contact: Chris Bolton, 703-704-1995
  - Acquisition Contact: Mary Paterno-Mihalko, 732-532-3992
  - Solicitation # : W909MY-04-R-0025
- Fuel Cell Technology (FFP/CPFF;$100K/$3M Through 1QFY08)
  - Technical Contact: Chris Bolton, 703-704-1995
  - Acquisition Contact: Mary Paterno-Mihalko, 732-532-3992
  - Solicitation # : W909MY-05-R-0004
- Applied Research In Countermine & Neutralization Technologies (Cost Reimbursement, CPFF, FFP Through FY 08)
  - Technical Contact: NVESD, Charles Amazeen, 703-704-1092
  - Acquisition Contact: Peggy Melanson, 703-325-6096
  - Solicitation #: W909MY-04-R-0024

Broad Area Announcement (BAA) Opportunities (Continued)

- Repair Parts For Second & Third Generation Night Vision Devices (Majorbus) (FFP; NTE $5M Per Action Through 4QFY09)
  - Technical Contact: LRC, Bob Esposito, 732-427-5908
  - Acquisition Contact: Kathleen Rizzo, 732-427-1497
  - Solicitation #: W15P7T-04-R-J204

- Battlefield Technology Applications for Land Warriors (Through 31 Oct 2011)
  - Acquisition Contact: Julianne Magee, 732-427-1499
  - Solicitation #: W15P7T-07-R-P208

- Command and Control Directorate (C2D) (Through 10 Dec 2009)
  - Acquisition Contact: Kenneth MacFarlane, 732-427-1493
  - Solicitation #: W15P7T-05-R-P209

- Lithium Manganese Dioxide Pouch Batteries (Through 8 May 2008)
  - Acquisition Contact: Andrew Dellomo, 732-532-3569
  - Solicitation #: W15P7T-06-R-P620

SMALL BUSINESS INNOVATION RESEARCH PROGRAM

Small Business Innovation Research

- **OBJECTIVE:** To stimulate technological innovation, strengthen role of small business in DoD R&D needs, foster & encourage participation by minority/disadvantaged persons, increase commercial application of DoD supported research in R&D results**.**

- **CONTRACT TYPE:** Firm Fixed Price (FFP)

- **ESTIMATED VALUE:** $5.0M

- **KEY MILESTONES**: (Phase I)

Pre-Solicitation	12 April 2007
Solicitation Opens	14 May 2007
Solicitation Closes	13 June 2007
Contract Award	11 October 2007

- **PROGRAM CONTACT:** Suzanne Weeks, (732) 427-3275, email: Suzanne.Weeks@us.army.mil

- **ACQUISITION CONTACT:** Deborah Gilligan, 732-532-5454

Small Business Innovation Research

***FY07 Program* - 42 Topics**

website:

www.dodsbir.net/solicitation

Materiels

Microelectronics & Photonics

Sensors & Information Processing 29

High Performance Computing & Simulation

Power & Directed Energy

Phase I

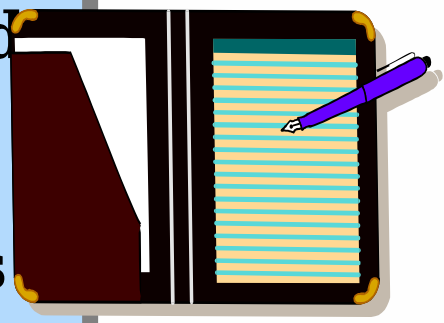
Feasibility Stud

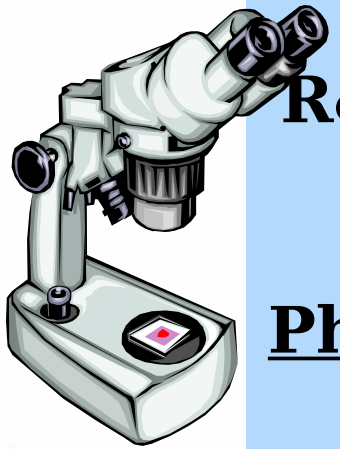
6 Months

NTE $70,000

Option Funds

NTE $50,000





Phase II

R&D 2 Years

NTE

$730,000

Phase II Plus

1 Year -

$250,000

Matching

Phase III

Commercialization

Funding from

Non-SBIR Source

Questions